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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,198	03/30/2004	Hanching G. Wang	PD-200109A	5150

7590 04/04/2008  
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EXAMINER
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WENDELL, ANDREW

ART UNIT	PAPER NUMBER
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2618

MAIL DATE	DELIVERY MODE
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04/04/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/813,198	<b>Applicant(s)</b> WANG ET AL.	
	<b>Examiner</b> ANDREW WENDELL	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 27-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-32, 35-39, 43 and 44 is/are rejected.
- 7) ☒ Claim(s) 33-34 and 41-42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 27-32, 35-40, and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (US Pat# 6,535,734) in view of Patouraux (US Pat# 6,804,986) and further in view of Gayrard et al. (US Pat# 6,703,970).

Regarding claim 27, method claim 27 is rejected for the same reason as apparatus claim 35 since the recited elements would perform the claimed steps.

Regarding claim 28, method claim 28 is rejected for the same reason as apparatus claim 36 since the recited elements would perform the claimed steps.

Regarding claim 29, method claim 29 is rejected for the same reason as apparatus claim 37 since the recited elements would perform the claimed steps.

Regarding claim 30, method claim 30 is rejected for the same reason as apparatus claim 38 since the recited elements would perform the claimed steps.

Regarding claim 31, method claim 31 is rejected for the same reason as apparatus claim 39 since the recited elements would perform the claimed steps.

Regarding claim 32, method claim 32 is rejected for the same reason as apparatus claim 40 since the recited elements would perform the claimed steps.

Regarding claim 35, Miller teaches means for computing asymmetry angles (correction for pitch, roll, and yaw angles; Col. 5 lines 27-49 and Col. 6 line 48-Col. 7 line 19); and means for using the asymmetry angles to correct the pointing angle using measurements (Abstract, Col. 3 lines 1-15, Col. 5 lines 27-49, and Col. 6 line 48-Col. 7 line 19). Miller fails to clearly teach a beacon sensor and beacon angles.

Patouraux teaches means for computing beacon asymmetry angles (pitch and roll angles, obvious there is beacon signals [therefore beacon asymmetry angles] being sent for a beacon sensor to be present); and beacon sensor measurements (Col. 4 lines 40-61).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate a beacon sensor as taught by Patouraux into Miller's correction apparatus in order to provide fast measurements (Col. 1 lines 47-59).

Even though it is obvious that Miller in view of Patouraux teaches beacon asymmetry angles, examiner will use another reference to clearly illustrate that the signals (asymmetry angles) in Miller and Patouraux can be easily replaced with beacon signals (asymmetry angles).

Gayrard teaches beacon asymmetry angles (Col. 6 line 64-Col. 7 line 21, any beacon signal not aligned can have asymmetry angles).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate beacon asymmetry angles as taught by Gayrard into a beacon sensor as taught by Patouraux

into Miller's correction apparatus in order to lower costs and simplify design (Col. 2 lines 34-63).

Regarding claim 36, Patouraux teaches means for using the asymmetry angles as beacon bias angles (Col. 4 lines 40-61). Patouraux is vague in teaching beacon asymmetry angles.

Gayrard teaches beacon asymmetry angles (Col. 6 line 64-Col. 7 line 21).

Regarding claim 37, Patouraux teaches means for using the asymmetry angles as time-varying beacon bias angles (Col. 4 lines 40-61). Patouraux is vague in teaching beacon asymmetry angles.

Gayrard teaches beacon asymmetry angles (Col. 6 line 64-Col. 7 line 21).

Regarding claim 38, Miller teaches a terrestrially-based processor (Figs. 1-3). Miller fails to teach beacon asymmetry angles.

Gayrard teaches beacon asymmetry angles (Col. 6 line 64-Col. 7 line 21).

Regarding claim 39, Patouraux teaches a satellite-based processor (Col. 4 lines 40-61). Patouraux is vague in teaching beacon asymmetry angles.

Gayrard teaches beacon asymmetry angles (Col. 6 line 64-Col. 7 line 21).

Regarding claim 40, Miller further teaches means for computing a difference between known azimuth/elevation angles, and their corresponding predicted beam-formed azimuth/elevation angles (Abstract, Col. 3 lines 1-15, Col. 5 lines 27-49, and Col. 6 line 48-Col. 7 line 19).

Regarding claim 43, method claim 43 is rejected for the same reason as apparatus claim 44 since the recited elements would perform the claimed steps.

Regarding claim 44, Gayrard further teaches wherein the beacon is a terrestrial beacon (Col. 6 line 64-Col. 7 line 21, satellite).

***Allowable Subject Matter***

3. Claims 33-34 and 41-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

4. Applicant's arguments with respect to claims 27-44 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW WENDELL whose telephone number is (571)272-0557. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Wendell/  
Examiner, Art Unit 2618

/Nay A. Maung/  
Supervisory Patent Examiner, Art  
Unit 2618

3/21/2008